MARCH 29, 1996 — 0900

COOP'S TECHNOLOGY DIGEST

-A Timely Report On The World Of Communications-

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REACHING CTD: Telephone (64) (0)9-406-0651; 24 HOUR FAX (64) (0)9-406-1083
NEXT ISSUE DATE: May 1, 1996

COOP'S TECHNOLOGY DIGEST / SUBSCRIPTION INFO

There are ten (10) issues per year on a schedule dictated by industry events. The readership includes telecommunication industry consultants, broadcasters/telecasters, brown goods importers, retail stockists, installation and maintenance firm personnel, educators, regulatory agencies, business investors and Arthur C. Clarke. All copies sent via airmail / Fast Post. Annual subscription NZ$250 per year within New Zealand, US$250 per year outside. In Australia, CTD is represented exclusively by AV-COMM Pty Ltd, PO Box 225, Balgowlah NSW 2093: Tel. (61) 2-9949-7417; Fax. (61) 2-9949-7095. Outside of Australia, make payment out and mail to:

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COOP'S TECHNOLOGY DIGEST

MARCH 29, 1996 ◆ VOLUME 96-02-25

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Programming Sources Go Into Overload

In CTD 96-01-24 we reported on the new availability of the so-called "European Bouquet" of DVB Compliant satellite programming now scheduled for April start into the Pacific and Asia via AsiaSat 2. We warned that given the onrush of new satellites during the 1996-1998 period, this might only be the tip of an iceberg which could well grow into a significant number of additional television programming sources within 24 months. We also reported on the uncertain technical coverage of then newly launched Indonesian satellite Palapa C1 (113E) and the possibility that this satellite might bring a sizeable number of new programming sources into New Zealand and the South Pacific.

On March 16th at 0000UTC the first of the new Palapa C1 transponders switched into service and within an hour reports arrived at our sister publication SatFACTS Monthly telling of extremely strong reception on modest size dishes from Invercargill to Cape Reinga. By 0000UTC on March 18th all of the former programmer customers of now retired Palapa B2P had made the switch to the newer C1 satellite. Here is the box score for New Zealand, New Caledonia and eastern Australia. "Yes" indicates acceptable home quality reception with the dish sizes shown. For cable quality, move to right one full antenna size from the first "Yes" shown.

TV Service	2.4m antenna	3m antenna	3.7m antenna	4.5m antenna	7.3m antenna
Star TV					Yes
SITV/Brunei					Yes
ESPN *					Yes *
TV Indosair				Yes	Yes
An-Teve					Yes
CNN		Yes	Yes	Yes	Yes
TV3 Malaysia			Yes	Yes	Yes
RTM Malaysia			Yes	Yes	Yes
CFI France	Yes	Yes	Yes	Yes	Yes
MTV Asia					Yes
TPI Indonesia		Yes	Yes	Yes	Yes
GMA Philippine					Yes
HBO Asia *		Yes *	Yes *	Yes *	Yes *
SCTV Indonesia					Yes
ABN Singapore		Yes	Yes	Yes	Yes
ATVI Australia					Yes
TVRI Indonesia		Yes	Yes	Yes	Yes
RCTI Indonesia					Yes
TNT /Cartoons*		Yes *	Yes *	Yes *	Yes *
Discovery *					Yes *
CNBC				Yes	Yes

For home dish reception most antennas sold are in the 2.4m(etre) to 3.7m range. With a conventional medium grade of analogue satellite receiver and required equipment, a dish system in the 2.4m size range typically sells inside of New Zealand for $3,500 installed. A 3m size antenna goes for around $4,200 installed while the 3.7m costs in the $5,000 range. By stripping the antenna system of the motor drive accessory (which allows the dish to navigate between multiple satellites) and the motor controller, as much as $900 can be knocked off of these prices. A dish without a motor and controller would function only on a single satellite. Thus a 3m dish without motor equipment could be pointed full-time at Palapa C1 and produce 7 new programme service channels for around NZ$2,600 installed.

But there are hitches. Note that of the 7 services available on a 3m size dish, two have an asterisk. This means they are encrypted and are only decoded after a subscription is arranged. The Palapa C1 satellite, while now widely received in the (south) Pacific, is basically an Indonesian and Malaysian coverage instrument. Within Indonesia four US based programmers (TNT + Cartoons, Discovery, HBO Asia and ESPN) sell themselves through an Indonesian company (Indovision Jakarta; fax 62-21-850-8243, tel 62-21-522-2793; [Mr.] Pati Loevis) on an annual subscription basis. The fee for this package of programming is US$480 per year. To descramble the (PAL format B-MAC) encryption requires purchase of a Scientific Atlanta model CDE-2000 decoder; typical street price US$500. Note this is a decoder only, not a full IRD (integrated receiver + decoder) and it becomes an accessory that follows the standard receiver. Also note that not all analogue satellite receivers can be connected to the CDE-2000; it requires "*unfiltered, unclamped baseband output*" from the receiver to operate.

Discovery, ESPN and TNT + Cartoons were previous to Palapa C1 receivable in the Pacific region; all appear on PanAmSat PAS-2 in similar B-MAC encrypted form. HBO was not previously available.

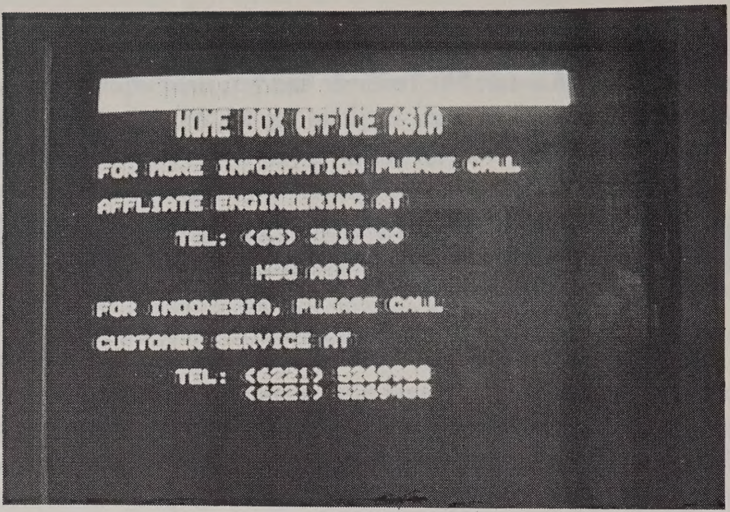
However, all of this is a moot point and more academic than practical for a number of serious reasons:

1) Although the Indovision Jakarta service is sold directly to individual homes within Indonesia (and on occasion outside of Indonesia but not with the knowledge nor approval of any of the programmers), it is not available directly to homes in, say, New Guinea, the Solomon Islands nor Australia. In the case of HBO Asia, Singapore based Jim Marturano tells CTD:

"*Our copyrights for the films we show are cleared only for specified countries within Asia. Australia and New Zealand are considered in the same breath and we have no contracts with film suppliers to resell (*i.e., deliver to cable TV nor homes*) in either country. I do not anticipate this will change anytime soon since the studios we deal with already have existing contracts with other Pay TV providers in these two countries.*"

2) The Scientific Atlanta CDE-2000 PAL B-MAC decoder is only sold directly inside of Indonesia and its sale in, say, New Zealand would be a possible violation of the 1995 Copyright Act (see CTD 9503, p.9). The operative word here is "*possible*" since the 1995 Copyright Act did not properly address this specific situation. The Act implies that if a programme service provider announces his programmes are not available (into New Zealand) and encrypts them from free to air viewing, that the combination of these two actions makes it illegal to acquire and utilise such a decoder here. Again, the operative word is "implies" as the Act was more concerned about the "hacking" (manipulation of an encrypted transmission so as to receive it without making payment for same) than it was with actually going offshore to acquire (by paying for) a decoder and then bringing it back to New Zealand for use. The act does, however, address the grey area of selling such decoders directly here, from within New Zealand.

The to be tested fine point in the law here is simply the place of use of the service, not the actual use after payment. The Indovision service consists of not one (HBO) but four separate programme channels, and three of these channels (ESPN, TNT + Cartoons and Discovery) are in fact received and used within New Zealand (ESPN by Sky, Discovery by Sky and cable operators, TNT + by cable operators). Thus HBO is unique when it claims not to have "*copyrights cleared for New Zealand*" and recites this as a reason why it cannot deal with users here. That Discovery, ESPN and TNT + do have New Zealand copyrights cleared in their programme source contracts is obvious or they would not be



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HBO ASIA
FOR INDONESIA, PLEASE CALL
CUSTOMER SERVICE AT
TEL: (6221) 5269088
(6221) 5269488

FORBIDDEN FRUIT IN OUR AIRWAYS? New Zealand decoder designed to process HBO Asia and TNT + Cartoons acknowledges presence of suitable quality signal from Palapa C1 but advises "*You have no subscription for this service*" through on-screen text. If a subscription can be acquired through Indonesia and the signals are here on 3m size dishes, can public interest be far behind?

available here to Sky, et al. So would a 3m dish system receiving TNT+, for example, and paying for the service after acquiring a CDE-2000 decoder through Indonesia actually be breaking the New Zealand Copyright Law? Think about it; slowly. **(1)**

To Pay or Not To Pay: The ABN Dilemma

Asian Business News (ABN), at one time an investment by Television New Zealand which made major contributions to getting the 24 hour news and financial information channel on the air, has been available into New Zealand (Australia et al) for nearly one year. The service has been delivered here using the PAS-2 satellite and a interim Scientific Atlanta MPEG (1.5 version) format. Because the service has been encrypted and can only be accessed through a suitable SA receiver after conditional access (CA) has been approved, growth of the service has been somewhat limited in the Pacific region. Several different firms represent ABN in New Zealand and Australia, each has concentrated on selling semi-commercial dish installations to hotels, financial service offices and stock brokerage firms. A smaller quantity of DTH systems have been sold to private individuals, primarily recent Asian immigrants who wish to maintain a timely business connection with the Asia business community. ABN does a laudatory job of keeping viewers up to the minute on the fast changing world of commercial business.

One of the primary reasons why the service's growth here has been slow is that the special Scientific Atlanta (model D9222) receivers typically sell for NZ$3,000 and up. And once installed, they are seldom useful for much more than receiving the ABN service.

Now along comes the Palapa C1 satellite and wonder of wonders, ABN is not only very strong into New Zealand on this satellite, it is transmitted via C1 "*in the clear*" in a standard PAL analogue format. Now anyone with a suitable (3m) dish and a very modestly priced (as low as NZ$500) receiver can tune in the ABN service without paying for a special receiver, and without paying the typically NZ$100 per year "user fee" that goes along with the PAS-2 delivered signal.

ABN remains free-to-air (FTA) on Palapa C1 because for most Asian services on this satellite and others serving the Indian Ocean region. FTA is what the competition demands. ABN carries

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1/ To help you think it through: **#1:** The subscription fees are paid. **#2:** The decoder is not illegal to own in New Zealand. **#3:** The copyrights for TNT + Cartoons have been cleared for New Zealand. We strongly urge those with an interest in this subject to go back to CTD 9503 (March 31, 1995) for a reread of our extensive analysis of the (new) Copyright Law. Limited copies are available at NZ$25 from Coop's Technology Digest, PO Box 330, Mangonui, Far North (Visa orders to fax 64-9-406-1083).

carries5advertising and will certainly one day manage a profit largely from the sale of commercial air time. Thus the PAS-2 feed of ABN has been out of sync with the rest of the ABN business plan from the onset. There is obviously a "business adjustment" here for existing representatives of ABN and those who sell the expensive digital receiver previously required to access ABN through the PAS-2 satellite.

Cable TV Benefits from Palapa C1

The primary downside of Palapa C1 availability into New Zealand (and the western and central Pacific) is the policy of programmers such as HBO Asia not to deal with certain geographic locales. HBO's Jim Marturano did not close the door on cable TV systems outside of New Zealand and Australia being granted "affiliate status" in our discussion of March 20th.

ABN/Asia Business News is analogue FTA on Palapa C1; 3m size dish required.

"*Each locale will require some research. Some of our major movie studio sources may have existing agreements with Pay TV groups who have asked for (and been granted) exclusive rights for some islands (*Norfolk, for example, is often 'thrown in' with Australia; the Cooks may be lumped with New Zealand whether these rights have ever been utilised or not*). We will entertain business plans which encompass regions beyond New Zealand and Australia and settle each one an on individual basis*."

Backing up this statement are reports to our SatFACTS Monthly from locations in the central and western Pacific where HBO is authorising, for two-week test periods, access to their Palapa C1 feed. As Marturano told us, "*We don't like to walk away from customers and if we can do this, we will.*"

For present or would be cable operators in the Pacific (including New Zealand), Palapa C1 has a mixed level of attractiveness. Much of the programming now available on cable-size dishes (3.7m and up) is ethnic in content. One cable operator observes after testing the new signals, "*There are only so many Indonesian channels which I can offer to my customers*." Assuming a cable operator would be willing to install a 4.5m dish for C1 in New Zealand, there are 11 new channels available. Of these, two are B-MAC encoded and 1 (TNT+) is already available via PAS-2 (HBO being the other). Thus 9 of the 11 are "analogue" and worthy of consideration for cable carriage. Of those:

1) Three are Indonesian (of which one might be worthy of carriage)

2) Two are Malaysian (again, one possible carriage)

3) CNN and CNBC are already available from PAS-2 with marginally better signal quality there

4) ABN is available from PAS-2 as well but only after purchasing an expensive receiver and agreeing to pay a monthly fee per subscriber (no fees through C1).

5) And that leaves Canal France Internationale (CFI) as an obvious cable choice. No, it is hardly "all French" in content - a significant part of each day is in English and wonder of wonders (for a French service), French newscasts are subtitled in English.

All of this may suggest that while the Palapa C1 satellite has gone into operation and is delivering strong signals on a variety of channels into the (south) Pacific, the commercial value of these channels for at least cable TV operators is quite modest. The most cable- desirable service (HBO Asia) is forbidden fruit and below that programme level the next most desirable service (CFI) is less than fully English (2).

The real winners with the turn-on of Palapa C1 are likely to be the sellers of home DTH equipment. As CTD goes to press we have reports of the arrival of the first "trans-border" Indovision decoders into the Pacific that will come out of their boxes functioning on HBO et al. Half the size of a compact VCR, they will enter packed with the dirty underwear or wrapped in yesterday's Singapore newspaper. And they will quietly go into homes sporting 3m or slightly larger dishes throughout an area measuring more than 3,500km east by west with little regard for their questionable "legality."

CURRENTLY AVAILABLE into NEW ZEALAND for CABLE and DTH on C-BAND

AsiaSat 2	Palapa C1	Rimsat 41	Rimsat 42	PanAmSat 2	Intelsat I180
RTPi - Portugal	CNN	RAJ - India	EMTV - PNG	ABN-Singapore	WorldNet - USA
CCTV - China	TV3 - Malaysia			CCTV-China	RFO - Tahiti
Deutsche Welle	RTM - Malaysia			CTN - China	
RTVE-Spain	CFI - France			NBC Asia - HK	
RAI Uno-Italy	ABN-Singapore			CMT - Nashville	
MCM-France	TPI-Indonesia			TNT+Cartoons	
TV5-France	TVRI-Indonesia			CNN	
	TNT+Cartoons			NHK - Japan	
	HBO Asia			Filipino Channel	
				ANBC - HK	

Explanation:

Reversed listings (i.e., Deutsche Welle) are scheduled to begin operation sometime in April. Shaded listing, i.e., TNT+Cartoons, are not available on this satellite for DTH users. Underlined (i.e., HBO) are not intended for use outside of Indonesia but policing of actual decoder locations may be difficult or impossible to properly monitor.

There is precedent. It is illegal for Canadians to own and utilise Ku band 'DBS' satellite TV equipment. More than 90,000 Canadian homes now do so and each goes through the subterfuge of creating within the USA a 'physical address' for that equipment. Laws alone cannot and will not stop the flow of satellite receiving equipment when people really want the programming that is so easily (if not freely) available in their backyards. It is a lesson we will learn in the Pacific as well.

Australia's Galaxy: Too Much Success

Australia's pay TV (cable and satellite delivered) industry has run into a rough patch. In particular the satellite delivered Galaxy service reported a pre-tax loss of A$97.5m for the period ending December 31 against a similar period loss ending December 31 1995 of A$31.6m. But there is far more to the rough patch than mere accounting numbers.

Australis Media Ltd. (AML, or Galaxy) began operations using MMDS (microwave) in late January 1995. The MMDS systems served segments of the major cities (Melbourne, Adelaide, Sydney, later Perth and Brisbane) but there were sizeable holes in the coverage patterns. To fill these holes and to also allow expansion into smaller regional population centres AML elected to establish a satellite feed of essentially the same programming packages using Optus B3 satellite. This satellite

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2/ Of some interest, Indonesian channels TPI and TVRI both programme English language blocks throughout the day and one of these falls into the 8PM to 10PM period (NZT). This is a fortunate happenstance since this time period lands squarely into New Zealand "prime time" and the English language movies (TPI) and nature programmes (TVRI) would, if carried by cable TV, offer at least alternate programming choices to English speaking audiences in the evening. Other English language (but Bahasa subtitled) English blocks carry programmes you suspected were lost during the San Francisco earthquake of 1907; such as early detective series Peter Gunn (TPI). Following the subtitling gives you a method of memorising snippets of Bahasa at no extra charge although certain words apparently do not "translate": SHIT, for example, when spoken in English produces no translation at all on the screen while fuck produces a multiple syllable word that barely fits inside a 21 inch screen. And you thought international TV was drab!

delivery began testing in late August (1995) and commercial service began in October. Prior to rollout of the satellite service AML was finding it difficult to actually service the majority of the homes requesting Galaxy TV. A significant amount of time was misspent sending installation personnel to homes which were located where service was not available. It was an elusive coverage at best using the 2.1 GHz (2100 MHz) band; homes on one side of the street would have normal reception, homes in the next block or across the street had none. Just getting a handle on where the service worked (and therefore where orders could be accepted) was time consuming and imperfect.

In theory the Galaxy Optus B3 satellite would serve virtually any home along the populated eastern seaboard, west through Adelaide and to Perth. Inland regions would not, however, be reached with even Optus. When the Optus service was initiated Galaxy claimed around 13,000 subscribers through the MMDS connection; a number many Australian observers thought inflated.

By the end of February (1996) Galaxy claimed to be serving 141,000 subscribers with a further backlog of 45,000. The original 13,000 subscribers paid A$299.95 to have Galaxy installed, a charge that dropped to A$19.95 during midyear; an attempt to find a "price point" which would entice reluctant potential customers to sign on. At the same time the installation fee was cut by 93%, the monthly fee was reduced from $49.95 to $39.95. There followed a modest increase in actual operating installations but the low price only re-emphasised something Galaxy knew painfully well: Most homes ordering a subscription lived where MMDS could not reach.

Satellite delivery was their great hope. By reaching the important densely populated regions in the major cities, it would "slide over" the terrain that was blocking MMDS service. There were (and continue to be) technical problems associated with the rollout of satellite service in October and November: The PACE model DGT-400 receivers had a high infant mortality rate (nearly 4 out of 10 died within 30 minutes of being released from their shipping carton, those that survived ran so hot that photos appeared in newspapers showing a disgruntled customer frying an egg atop a unit) and the conditional access (secure system of preventing unauthorised receivers from receiving service) was difficult to master (for some weeks it was simply turned off and anyone with a receiver gained immediate access to all of the channels). By mid-December Galaxy claimed to be installing as many as 7,000 satellite systems per week (through contract installers) and said they had a backlog of 75,000 orders. Everyone wanted a piece of the $19.95 install offer.

At about this time a proposed merger surfaced: Foxtel, the cable TV operator jointly owned by Telstra (the telephone company) and Rupert Murdoch's conglomerate, and Galaxy would merge. But first the merger had to clear regulatory approval from the ACCC (Australian Competition and Consumer Commission). On the table, allowing two of the three competitive pay TV service delivery firms to merge into one. Opponents, led by OptusVision (the third pay cable operator), cried foul and urged the ACCC to turn down the request for merger approval. Which ACCC did citing fears that the combine of Foxtel and Galaxy would bury OptusVision in a cloud of dust. ACCC sent the proposed merger back to Galaxy/Foxtel suggesting changes in the structuring. The application was submitted a second time and turned down once again. At our press deadline ACCC reports they have not reheard from the proposed merger participants.

Without a merger, Australian pundits believe Galaxy as a viable competitor to Foxtel and OptusVision is dead. How can that be if they have grown from 13,000 to 141,000 subscribers in just 8 months? The answer is complicated but involves cash.

Galaxy costs out each satellite installation at just under A$1,000. Until recently it was collecting A$19.95 and swallowing $980 for each customer hooked up. Galaxy was collecting A$39.95 per month from subscribers, now collects A$49.95. Galaxy has a per customer cost of nearly A$25 per month for programming. That simply means at $39.95 it had $14.95 left over to run its business and pay off its debt. At $49.95 it has $24.95 left over to do these things. If the customers cost Galaxy $980 more than they collect for installation, and Galaxy has $14.95 left over after paying the programming costs for that customer, how long will it take Galaxy to get back the $980 it spent to put service into the customer's home? You don't have enough fingers and toes for this one: The answer is 65.55 months. Plus of course the interest on $980 as "borrowed" for that 65+ months. Or to put it another way, Galaxy had to retain a customer for five and one half years before it broke even on the cost of the equipment installed to service the customer. Not a good deal.

So bad a deal that when Galaxy passed 10,000 satellite installations in the ground it had run up a debt of A$9,800,000. At 100,000 satellite subscribers, A$98,000,000. At 141,000 subscribers the debt load just for satellite equipment rose to A$138,180,000. And with a backlog of 45,000 additional homes that had ordered the service, they were facing additional indebtedness of $A44,100,000. Galaxy would run out of capital and borrowing power before it ran out of new subscribers.

Some Australian media focused only on the gross receipts of Galaxy (at 141,000 subscribers paying $49.95 per month, A$7,042,950) but ignored that Galaxy had to pay its day to day operations cost and most importantly its programme costs. The movie contracts Galaxy holds for the Showtime and Encore channels are especially vulnerable. It is reported that if Galaxy is even late on its monthly payments to the movie studios, their "*exclusive access*" to the films of these four studios is lost and another pay television operator (such as OptusVision) is then free to step in.

So Galaxy raised the install rate from $19.95 to $199.95, and the monthly rate to the present $49.95. Better, but not good enough. Now rather than taking 65.5 months to buy their way out of the indebtedness each new subscriber creates, they require "only" 27.26 months. They still need the merger or at least an infusion of a sizeable amount of new operating capital. (In the proposed merger Galaxy would become the surviving corporation, and Telstra + Fox of Foxtel would become the controlling element).

Galaxy is looking to US investor-owners TCI (the world's largest cable operator) and Lenfest to bail it out if it cannot complete the merger. There may be other options. TCI is said to be looking at winding back Galaxy and turning it from an aggressive, hard marketing third competitor in the Australian TV marketplace to a "programme provider" that concentrates primarily on serving homes in areas of Australia where cable is not presently planned or being installed. Programme provider? This is reason one at Foxtel for the proposed merger. Remember the $25 per month which Galaxy pays out for programming? Foxtel is Galaxy's major "subscriber" taking the ten Galaxy programme channels for redistribution on cable. It has been the strength of the Galaxy programme package which has allowed Foxtel to vault, however temporarily, ahead of OptusVision in the cable TV trench wars. Australian media reports the contract between Galaxy and Foxtel amounts of A$4,5000,000,000 over 25 years: A$180,000,000 per year, $15,000,000 per month. The merger would have swallowed this indebtedness for Foxtel and by getting out from under this commitment in an A$700,000,000 merger Foxtel would have saved itself a bundle of cash outlay down the road.

Confused? So is everyone else. The Australian TV programme marketplace has always been out of step with the balance of the world; so much so that movie producers routinely earn 300 to 400% more for movies released to Australian TV networks than they earn for the same movies going elsewhere in the world. This artificially inflated "valuation" of TV programming rights has, unfortunately, followed into the pay TV start-ups there leaving the present trio of pay TV providers saddled with indebtedness far out of proportion to the realistic earnings potential of pay TV. The numbers simply do not add up on a profit and loss projection and this truth is finally becoming evident to those who have to sign the cheques.

YET MORE Cable TV Programming For New Zealand

During the Wellington TUANZ AGM (March 6-7) Saturn Communications' (formerly Kiwi Cable) Jack Matthews revealed his firm's 50% parent UIH plans to deliver into the Pacific ten cable TV programme channels via Intelsat satellite as early as July. He also confirmed a target price area of US$3.50 per cable subscriber per month for the ten channel package, and suggested more than ten channels could be on offer shortly after start-up.

UIH inherited with their buy-in of Kiwi Cable an agreement Kiwi had negotiated with Intelsat for a C-band transponder on one of three Pacific area satellites; 174E, 177E or 180E. The agreement was a "*right of first refusal*" for a satellite transponder capable of placing a 33+ dBw footprint into New Zealand and eastern Australia. This fit into a broader UIH plan to invest upwards of US$200,000,000 into expansion of Pacific region cable TV operations in the coming 12 month period.

CTD has learned that as of early March, United International Holdings, Inc. (UIH) was completing negotiations with nine North American and one European cable TV programming sources. UIH internal memorandums identify the programmers by description rather than by specific "brand names" and you, like we, are left to your own research to determine the precise identity of the following described services:

1) "Performing arts & foreign movies"
2) "24 hour news and feature story service"
3) "A general entertainment service drawn from prime time offerings"
4) "A combination fitness/lifestyle and family oriented channel"
5) "A new music service incorporating additional cultural elements"
6) "An entertainment and information channel featuring elements related to the home"
7) "A prime time channel from the United Kingdom"
8) "A channel dedicated to the outdoors"
9) "An entertainment and information channel featuring elements related to food"
10) "A channel devoted entirely to travel throughout the world".

At US$3.50 per month for the package of ten programme channels, the per channel cost (US$0.35) is similar to present charges for other vertical interest channels (CMT Asia, for example, is US$0.30 per cable subscription home per month).

UIH is calling this new package APV for Australasian Programming Venture. They say the programming will be delivered in a digital format but do not specify which MPEG construction will be used. Programmes will be in PAL, and "*time shifted so that prime time as originally broadcast in the USA, Canada or the UK will appear within your prime time blocks for* (the) *Asia-Pacific region.*" They plan additional channels as well, apparently to be more expensive than the per channel charge for the first 10 services, which they suggest will be available "on a tier." In cable parlance, a "tier" is an optional level of service that cable subscribers pay extra to receive above and beyond their "basic channel grouping."

A HOME GROWN Three Channel Service

A New Zealand "brand name" in television programme production is quietly approaching cable entrepreneurs throughout the Pacific offering a three channel package of programming to also be delivered via satellite (they say Intelsat I180) sometime between July and September. Their original offer was for six channels of programming but apparently the interest shown in the package by cable firms in Australia was not sufficient to support more than 3 channels.

The new service would consist of five hour programming blocks generated in Auckland and uplinked to satellite in two separate feeds; one for the New Zealand time zone and a second for the (eastern) Australia time zone. Each time block would appear three times in a 24 hour period. Cable operators are being quoted various pricing schemes for the three channel package with NZ$2.70 per month (NZ$0.90 per channel) for each cable subscription home being near the median of numbers on offer.

An uplink site for a to-be-constructed operations centre is nearing final selection with a site just north of Albany presently at the top of the list. The original plan was to uplink from closer to the centre of Auckland but a number of factors including possible microwave energy radiation health concerns ultimately ruled that plan invalid.

Although the three channel service will have a distinctive "Kiwi flavour" and be the first cable oriented vertical interest programming to come out of New Zealand, the actual programme material will largely originate outside of New Zealand. It will take on its "Kiwi flavour" through the on air packaging and presentation.

The service will employ DVB Compliant MPEG as a transmission format and we understand the supplier of the uplink equipment (DigiMedia Vision, Ltd; formerly NTL) will also supply the initial receivers for cable affiliates. Yes, this new enterprise has a new operations name as well: Multi-channel Entertainment, Ltd.

It is increasingly evident that by the end of 1996 cable operators throughout New Zealand and the Pacific will have an overabundance of possible programming sources available to them. Based solely upon programmers now announced or operating, just over 50 programme channels are now visible and three-quarters of the year is still to come.

TECHNOLOGY BYTES

...BITS and BYTES you may have missed in the rush to make a buck ...

March 29, 1996 / Issue 96-02-25

Satellite TV and Radio

Delivery of MPEG-2 DVB Compliant satellite receivers to replace existing MPEG 1.5 version receivers was scheduled to begin March 25. PanAmSat is overseeing the change out of receivers provided by Scientific Atlanta with model D9222 units being replaced by 9223s. The new "23" has the same suggested list price (US$1295) as the "22" and PanAmSat is scheduled to change out receivers using the Hong Kong digital feeds initially (i.e., CTN, ABN, CCTV and NBC Asia), followed by a change out of receivers fed from Singapore (TCS on C-band, various Taiwan feeds on Ku-band). Here is how it will work: Scientific Atlanta is the receiver supplier and PanAmSat is the customer. But PanAmSat provides only the uplink service (using SA MPEG format equipment) so the satellite operator makes it the responsibility of the actual programmers to arrange for receiver delivery and change out. Some programmers are providing the "23" shipped directly to the viewer-customer, freight prepaid while others are requiring that the end users pay the freight. In the case of New Zealand, it is likely "22" model users will also be required to pay GST and import charges as well. When the "23" upgrades are in hand, they can be installed and put into operation since the "23" is backwards compatible to the still in use MPEG 1.5 format. It will be the receiver user responsibility to return to either the programmer, PanAmSat or Scientific Atlanta the out of date "22" unit(s), as instructed. When all units using a particular feed (such as the Hong Kong uplink) are in place, then the uplink itself will upgrade from MPEG 1.5 to MPEG 2. Although "23" receivers are reported to now be starting towards Hong Kong uplink field users, the target date for the uplink itself to be changed over to MPEG 2 is sometime in May. (Scientific Atlanta Australia, Elizabeth Jennison, tel 61-2-452-3388)

Palapa C1 transponder assignments may not be cast in concrete (see p. 2, here). Indonesian satellite owner/operator PTTI is being especially careful to avoid any "attributable quotes" to the press but some of their transponder customers are not as quiet. C1 is not performing as intended (see detailed report in SatFACTS for April 15) and four or more of the programmers using the satellite have registered strongly worded protests concerning their "lack of coverage into the Pacific Ocean region." PTTI avoided making public detailed footprint coverage maps of Palapa C1 prior to launch (a not uncommon practice given the commercial sensitivities) but according to one programmer they were assured "*coverage equal to other competitors using the same satellite.*" In particular, American programmers using C1 are sold or marketed as a group and C1 as presently configured is producing far larger, wider coverage area for HBO and TNT + Cartoons than competitors Discovery, ESPN and MTV (as well as CNN which has coverage that falls roughly between the extremely good coverage of HBO and the extremely poor coverage of Discovery / ESPN). Attempts by the Indonesian satellite operator to correct these shortfalls in coverage are underway as we go to press. One suggested solution: Swap Indonesian telecasters TVRI and TPI (both having strong, wide area coverage) to transponders now in use by Discovery / ESPN but that still leaves at least MTV painfully short of coverage. MTV has been vocal claiming, "*We expected Pacific area coverage from this satellite.*" Palapa C1 is the first serious satellite to make use of a radical new "shaped beam" technology developed by satellite manufacturer Hughes. The ability of Hughes to "sculpture" precision footprints (coverage) has been widely questioned and the in-orbit results from C1 will do very little to support Hughes claims of this ability.

STAR TV AsiaSat 2 programming package for delivery into Indonesia and Japan (see SatFACTS #19, p. 9) is not proceeding according to intended schedule. Original testing of MPEG was done in DVB Compliant "open" format which anyone with a DVB Compliant receiver could access (little concern here: There may be ten in all of Asia and the Pacific!). More recently, "*big problems*" have developed according to a source in Asia. "*They are attempting to determine whether the problem is related to the uplink encoding or the receivers. And with so few receivers available, even to STAR itself, for testing they are having major trauma sorting this one out.*" Pace Digistar and prototype NTL IRDs are being tested. Separately, STAR TV has announced a new satellite fed cable TV service being developed for delivery to cable headends within China via AsiaSat 2. The service is, at least in English, called 'Phoenix.'

New Insight Into Saturn Communications Hybrid Fibre Coax System - Hutt Valley

Appearing at the 1996 AGM for TUANZ (Wellington, March 6 and 7) Saturn Communications (Kiwi Cable)'s Jack Matthews revealed little about his firm's marketing and rollout plans. However, he introduced the speaker that followed (Ray Cunningham of PacBell/Pacific Telesis) with the explanation that Cunningham was available to share the podium with Matthews because, "*He has been here in New Zealand assisting us in our own rollout of hybrid fibre* (optic) *coaxial networking for the Hutt Valley region.*" Whether Cunningham is personally assisting Saturn or his employer Pacific Telesis is assisting the start-up broadband network operator was not made clear.

Cunningham explained in considerable detail his firm's US$16,000,000,000 investment over the next decade in converting virtually the entire state of California from its existing POTS (plain old telephone service) network to a state of the art HFC system. A major "hub centre" has been established for the Bay region, chosen as the first rewiring district because of the rapid deployment of telephony capable cable television in the region immediately surrounding San Francisco. In a state with 32,000,000 people, he candidly admitted the rollout of the combination television / telephone / interactive video fibre plus coaxial network has been painfully slow. **On schedule?** Not quite and here he laid the blame on supplier Scientific Atlanta whom he said, "*are running a year or more behind schedule with the delivery of equipment that will allow our plant to interface with individual homes and businesses*." The system has chosen to place a subscriber interface box of new (SA) design outside of each home and this makes physical access to the box (which ultimately controls everything that goes into or out of a customer location) possible without having to enter a premise.

Matthews characterised Cunningham as a man working for a company with more practical HFC experience than any other in the world; possibly an attempt to suggest that same experience is or will be available to Saturn in their rollout of the (lower) Hutt Valley region.

Scientific Atlanta model D9233 consumer version DVB Compliant receivers, expected as recently as mid-March to be available by May, will not be. A report appearing in SatFACTS for April 15th will detail status, which basically is not good for lower priced DVB units. SA model 9223, the commercial version IRDs that are DVB compliant with all of the bells and whistles of a commercial receiver intended for broadcast or cable use, are still expected by mid-April into the Pacific. At least two New Zealand sources are scheduled to stock the units but initial shipments will be very small in quantity and no significant deliveries are expected before late May. Reasons: There are many, not the least of which is that virtually all of the production capacity of SA for the initial run of 9223 units will be swallowed up by the changeover of Hong Kong programme source PAS-2 connected receivers to DVB Compliant status.

JCSAT-3, Japanese C + Ku band satellite at 128E, has been observed testing MPEG digital video service on C-band. Origin or content of the MPEG transmission is not known although Japan is scheduled to begin testing on Ku band of a consumer MPEG delivered 50 channel television service in April. Two competing Ku band pay TV services for Japan are scheduled by the third quarter of 1997; one using JCSAT-3 and the other using Superbird 3 at 144E. The 144E service is backed by US pay TV operator DirecTV (42.5% owner) with Japanese partner firms. Modelled after the US DSS Ku band service, it will offer 100 television channels and some quantity of audio ("CD quality") programming channels using a 24" (.6m) dish which will sell with electronics in US$700 region inside Japan. DirecTV has a 50-50 partnership with Indian firm Modi Entertainment to supply a similar service there, is negotiating for similar approvals in China and Indonesia.

First Ku-band DBS to reach New Zealand? SatFACTS Monthly (March 15) suggested it could come from a little hyped American satellite called Tempo 1 with a scheduled launch date in mid September to an orbital spot at 166W/194E. Tempo holds this orbital position but now advises they have changed their orbital location plan for their first two satellites and Tempo 1 will go to a location more suited to serve North America (82W is being considered). A Tempo 2 satellite to be launched in November will be co-sited to double the number of high power channels available. However, Tempo does not rule out there being a Tempo (3) satellite at 166W as soon as "*mid 1998*." The firm admits it has Tempo 3 under construction and that a "*Pacific rim coverage beam that would include Australia and New Zealand*" is being considered. A high power satellite such as this would offer more than 100 digital TV channels to our region, fed directly from North America, to home style dish antennas in the 1m range. Other likely candidates for service to New Zealand on Ku DBS include a Japanese group using JCSAT 3 from 128E in mid-1997, a Filipino group operating from 144E by early in 1997, and that always in the wings possibility - the use of either Intelsat or Optus to feed programming into the Pacific.

Optus had planned to have a fully transportable uplink earth station (TES) in New Zealand by January. This has now been delayed until "*middle of the year*" because of what Optus characterises as "*unprecedented demand*" in Australia. Optus will use the uplink for show and tell demonstrations to educate Kiwis as to the possibilities associated with narrowband (data, radio, voice) and wideband (television) uplinking. Transportable uplinks are also on the agenda at TVNZ where C-band units are under discussion.

ROLL OUT OF TELECOM HFC IS REVEALED

Also during TUANZ (see preceding page report) Telecom sent Graham Mitchell to present a paper entitled "The Customer Response to Multimedia." Mitchell attempted to explain how much effort Telecom has gone to and is going to quantify the precise nature of future customer needs as they begin their own reconstruction using some form of adaptive fibre and coaxial technology. While graphic and colourful, Mitchell revealed absolutely nothing about the precise Telecom plan to update their own antiquated POTS to a more information friendly broadband network.

Questions from the floor were pointed. "*When and where will Telecom be rolling out broadband technology?*" was included. Mitchell's answer, it appeared, was premature and as he explained in general terms plans to rollout in areas of both Auckland and Wellington it was soon evident he may have released information without approval of his office.

Within 24 hours the Telecom PR department was notifying newspapers to expect a *"major press release detailing (their) broadband network construction plans*" before the end of the day. The New Zealand Herald obligingly held space on page 1 of the Business News Section for their Saturday morning edition, March 9.

The 8 March release (arriving at The Herald at 5:08pm) from Telecom was headlined "*Telecom Expands Broadband Network*," which The New Zealand Herald converted to, "*Telecom Plans Big Expansion of Its Network*." The release quotes Video and Information Services Customer Sales and Service Director John Proctor extensively. "(the) *initial rollout to 6000 homes in parts of Auckland and Wellington are progressing well and infrastructure in those suburbs will be in place by July*." The release also states: "*In the next phase, Telecom will pass cable by an additional 70,000 homes in Auckland and Wellington and will extend cables in parts of East Tamaki and Howick. Cable is currently being laid in East Tamaki. A trial in New Lynn and Pakuranga will continue for research purposes. In Wellington the roll out will extend to Central Wellington, Central Lower Hutt and areas of the Western Hills. Contractors are now laying cables in Whitby, Papakowhai and parts of Paremata.*"

At TUANZ Graham Mitchell had allowed cable was being installed in Whitby and Lower Hutt in Wellington, central Auckland plus the suburbs previously cited in Auckland.

There are some interesting conflicts in all of this:

1) Whitby is an area where a test cable TV system installed by BCL has been operating since June 1994 (see CTD July 1994, 94-07-10).

2) Central Wellington is an area where an extensive effort is underway by 17 companies and agencies to lay a fibre optic cable throughout the area, quite independent of Telecom.

3) Central Auckland requires greatly increased telecommunications bandwidth for computer and other high sped interconnections and the same Wellington group has suggested it plans to do a similar project in Auckland as in Wellington.

4) The Hutt Valley region is the target of the new Saturn Communications $40,000,000 project funded by its US owners and Saturn has made no secret that it plans to offer telephony as well as video services.

5) The Tamaki projects in Auckland involve elements of Sky Network while the Howick area identified already has a Sky + Bay of Plenty Electricity HFC system going in.

In summary, virtually every area Telecom identifies in their release is an area where a competitor is already at work which strongly suggests Telecom is not initiating any broadband of its own, only responding where others are starting systems which it fears may become mature as possible competition to their base telephone network.

CNN will launch its own sports network, to compete with ESPN and NewSport in North American domestic TV marketplace, this December. However, network which is in partnership with publication Sports Illustrated, will not carry live sporting events, merely "sporting news" and event summaries. There has been no announcement as to the international availability of this service.

DTH (direct to home) or DBS television is now operating in 5.4% of all US homes, markedly up for 3.4% as recently as last June. Heaviest percentage of homes taking service is in more rural areas (Montana at 16%, Vermont at 14%, Wyoming at 13%) while lowest is in Washington (DC - 0.8%) and Hawaii (0.47%). Hawaii, however, is presently special case requiring sizeable (2m plus) dishes whereas balance of US requires 0.5m dish. Newest DBS satellites coming on line this year promise far stronger signals into Hawaii and Alaska and raise speculation that some of this may "spill" into South Pacific as well.

DTH product brand names are coming out faster than flies at a summer picnic. Latest additions: HNS from Hughes, Memcorp (Memorex), Philips, Hitachi, Sega, Apollo and Samsung. There are now 11 brands of DSS/DBS receive systems on offer in USA. Satellite dish dealers are paid commission for programming sales as well as profiting on sale of hardware in most US systems: 5% commission on programming sold if dealer does up to 75 sales per quarter year, up to 11% for sale of 600 or more systems per quarter.

Latest DBS service to begin operation - Echostar USABSS-3 satellite at 119W. It is scheduled to be augmented by second satellite at 148W (yes, we can see that location nicely from New Zealand) by perhaps September. However, launch of 148W bird was to have been handled by China's Long March rocket and odds are this launch system will not fly on schedule following misadventure in February while launching new Intelsat satellite. Echostar is trying to arrange an alternate launch using another facility. Coming on line in April, AlphaStar service using AT&T's 402R satellite (not visible from New Zealand).

C-band TVRO (home dish) systems sales in North America dropped by more than 50% during 1995, result of much lower cost, smaller Ku-band DBS systems. Industry trade association SBCA reported just under 200,000 units sold during 1995, while DBS systems topped 1,300,000. Suppliers Toshiba and Uniden have pulled back their C-band marketing efforts, cut the number of receivers for C-band on offer, and believe next surge in C-band will depend upon availability of MPEG digital hardware.

News Corp - MCI combo that purchased 110W DBS space in (US) FCC auction for US$682.5m has placed order with Space Systems Loral for a pair of 32 transponder satellites that will launch via Russian Proton vehicle in late 1997 and Lockheed Martin Atlas in early 1998. Firm will be fourth, fifth or sixth US DBS operator by the time their birds are flying.

CMT / Country Music Television could be in for significant format change: News. Article in New Yorker Magazine (March 18) reports US national network CBS is negotiating for purchase of Gaylord Entertainment which owns CMT and if sale happens CBS would like to convert CMT from music to an all news channel. Boy Howdy - that's a big change!

Iran's total ban on owning a satellite TV dish is receiving criticism from many officials there. Latest vocal denunciation comes from daughter of Iranian President Akbar Rafsanjani who told local press, "*This policy of limitation and banning is a wrong one.*"

Digital TV and Radio

Korean manufacturer Daewoo may be first major Asian supplier to bring out DVB Compliant MPEG satellite receivers. Firm claims it has developed using its own research facilities complete C or Ku band receiver package based upon MPEG-2 and further claims the receiver system meets all of the requirements for DVB Compliancy. Daewoo has told South Pacific distributors to anticipate delivery of DVB level satellite TV hardware by November of this year. Daewoo models DSS-7500 and DSS-730 are now entering US market through Mission Electronics at list pricing as low as US$599.

New legislation in USA will redefine the technical parameters relating to duplicating film and programming material. Present legislation was drafted and adopted in "*analogue era world*" and lawmakers are being pressed by (the) Motion Picture Association (of) America (MPAA) to have new laws in place before the first digital (DVD) hardware arrives in the marketplace late this year. Several major studios have warned they will not release movies on DVD until there is legislation in place to protect their copyrights. Biggest concern: That because of the noisefree environment of digitally recorded or broadcast TV, an endless series of copies (and copies of copies) will be possible whereas with analogue format, noise build-up self-limits copy generations to some number between 3 and 5 depending upon the quality of the recording equipment and skills of the copier. Technically, they are proposing that a buyer or user (renter) of a digital product would have the ability to make a single (backup) copy from his purchased copy, but not more than one. Similarly, dubbing from digital to analogue would somehow be technically controlled to make such dubs impossible to do. Of course all this really does is to force the pirate copy makers to develop their own technology to defeat the system. And the battle goes on.

Telecom NZ parent Bell Atlantic has signed deal with Thomson Consumer Electronics for procurement of 3 million digital TV set-top converter units for use with MMDS systems to be built by company in USA. Thomson in turn has reached agreement with US firm Comstream which will build set-top unit front ends and modulators. The set-top units will begin a trickle delivery in last quarter of this year, extending through 1999. There is a clue here to Telecom activating their group of 8 MMDS frequencies they hold in New Zealand (see CTD 95-2-15, p. 2): If parent will not have the all important set-top units in quantity for US use until 1997, the local use of such units (suitably modified for PAL which is not a guaranteed refinement) could not follow much before mid 1997 at best.

Strike Finnish firm Nokia as possible source for MPEG television equipment. Firm has decided after US$81m loss to abandon both TV set and VCR production. Nokia samples, prototypes of MPEG satellite and home TV receiving systems, have been shown privately and at trade shows for past 12 months. No official word it will drop out of this phase as well but company statement lumped all television products into single basket and allowed the axe to swing. Nokia was Europe's third largest video products manufacturer.

Consumer Electronics

Videogame pioneer Atari is planning to liquidate all of its videogame assets as part of proposed merger with component and hard drive supplier JTS Corporation. Biggest losers here are present day owners of Atari equipment who could find replacement parts and service work for their equipment impossible to locate. Latest Atari product line, Jaguar, reportedly has 150,000 units spread world-wide. Jaguar 64-bit system which once sold proudly for US$250 is now being close-out discounted as low as US$49.95 with software down to US$10.

Sega is writing off US$248m in losses from European operation failure and dismal acceptance of 32-bit Saturn system. Sega has seen fortunes go from peak 1991 sales of US$571m to a forecasted US$190m this year.

US$99 TV camera, designed for "Kiddie Market" and allowing black and white recording on a family VCR, will be marketed by Tyco Toys in June. This is not the first such product: Fisher-Price tried 'Pixelvision' camcorder at US$150 back in 1987. It didn't catch on with kids or families but owning and using one has now become something of a fad amongst elements of American society. Tyco's KiddieCam will be totally automatic, include cords for connection to VCR and TV set, and be point and shoot operation. A colour version is scheduled for 1997.

EIAJ (Japanese trade association) has issued its forecast for sale of video products through year 2000. Some surprises. Although digital camcorders are now available in small quantities (100,0000 were sold in 1995, rising to 803,000 in 1996 and 5.47 million by 2000), EIAJ sees analogue products still dominant in four years. They believe 52.6 million analogue VCRs will sell in 2000 against 47 million in 1995. DVD? They forecast 718,000 players this year rising to 10 million in 2000. (However 3DO President Hugh Martin forecasts 120 million DVD units will be sold annually by year 2000.) In TV receivers, EIAJ sees 16:9 wide screen sets (which are already very popular in Japan) growing at average rate of 55.7% per year through 2000 (27 million plus that year from present 3 million of 1995).

Matsushita is raising monthly output of digital format camcorders to 30,000 units during April.

Sony has new policy for selling blank MiniDiscs at retail. Previous policy attempted to establish perhaps too high price per disc; new policy suggests retail discs of 60 minute length at NZ$14 and 74 minutes length at NZ$17; a 35% drop. Sony forecasts sales of 20,000,000 blank discs in 12 month period beginning April 1st. The product is little known outside of Japan.

China produced 34,699,300 television sets in 1995 (combination of colour and black and white), making that nation world's largest supplier. 56.4% were colour, with totals up 9% over 1994.

Japan's life time employment strategy at Matsushita is undergoing change. Firm will provide early retirement to 4,500 "managers" in 50-58 age group, offering them 250% normal salary by retiring early and during last 3 months of active employment, employees will receive fully paid vacation time and assistance in retraining in other fields if they wish. Purpose is to make room for younger employees who are presently stuck behind older employees on promotion ladder.

Cable/Fibre/MMDS/Pay TV

UK cable versus telephony numbers are of interest to those thinking about building cable TV here. Construction of UK cable is moving at rapid pace, industry expects to pass 50% of total UK homes with telephony capable cable TV systems by end of this year. Unfortunately, laying cable is proceeding far faster than activation of the cable networks with electronic portions lagging far behind cable and fibre laying. Although 50% may have cable in place, only 36% are likely to be passed by operating cable on December 31. New builds this year amount to US$3.2B investment. The UK grants cable franchises on regional basis; 135 granted to date with 107 of those operational or under construction. The industry expects to have cable in place before 80% of all UK homes when the major new construction period is over (2000-2001). Penetration (percentage of homes subscribing to cable) is 20.5% in those areas where cable offers only television, 31% in areas with both

CORRECTION NOTED

(4 March 1996) SKY Television Facsimile

"Dear Bob,

An employee brought me a copy of Coop's Technology Digest. The issue was 9508. I wish to refer to page 15 where you state:

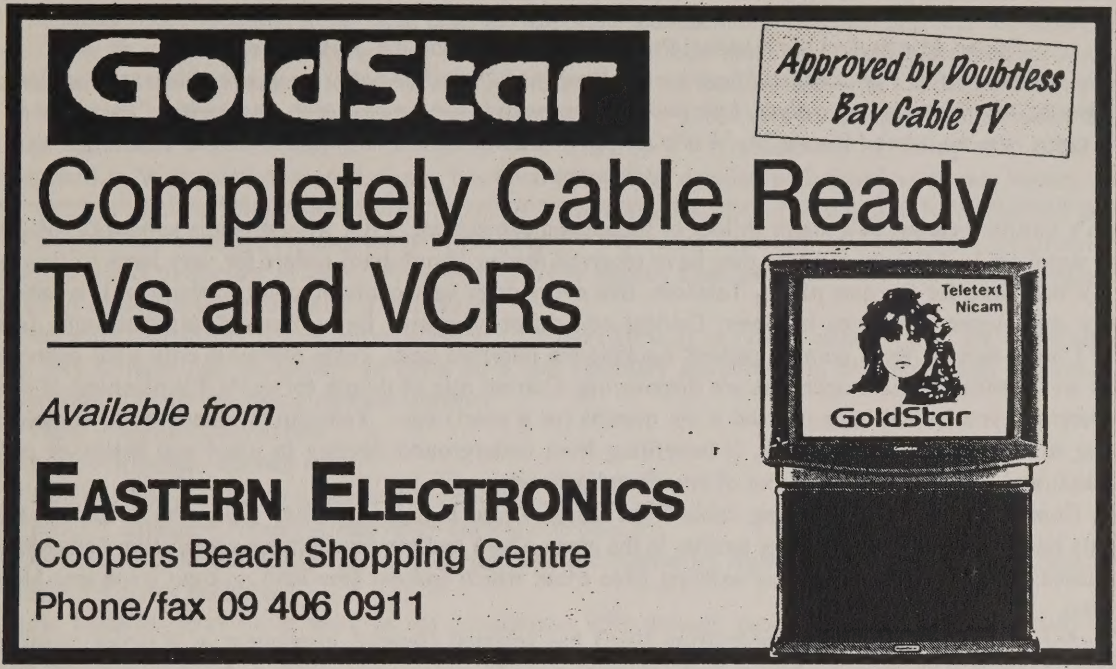
'At risk is the continued top-man positions held by Smith and Fellett.'

Bob, I am very disappointed that you would print such a statement. I was mistaken to believe our friendship meant more to you. The statement is inaccurate and inflammatory. Has your respected journal been reduced to a scandal sheet? I demand a retraction. The correct statement should read:

'At risk ***are*** *the continued top-man positions held by Smith and Fellett.'*

Thank you.

John Fellett"



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SIGN OF THE TIMES

Local newspaper print advertising in communities where cable television is gaining a foothold already is reflecting the inroads of cable. This advertisement appearing in a Northland newspaper indicates the Goldstar dealer has quite properly figured out that new "Cable Ready" televisions and VCRs become shopping priority items with new cable subscribers. The mystery of what is and is not "cable ready" remains elusive to many importer/distributor firms however as this shop's nearest retail competitor has pasted signs on several of his own models proclaiming them to be "cable ready" when in fact they are not. "Cable ready" TVs and VCRs have the ability to tune through the full frequency range of 45 (48) to 550 MHz without any tuning breaks (CTD9510-23, p. 13). Most top of line sets do this (but not all) as well as many 1995 and 96 AWA and Goldstar models. VCRs are a particular problem with but two Goldstar models currently known to possess this ability. Most brand name distributors are slowly recognising this problem and promise they will be competitive in this new area by the 1997 model season.

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telephony and TV on same line. "Churn" (homes signing up and then subsequently dropping off lines) is higher than industry norms world-wide; 3% for those homes without telephony service, but under 1% for those with. The message for UK cable is abundantly clear: Provide a dial tone with the TV and your subscription rate jumps nearly 50% while your drop off rate reduces by 2/3rds.

Lawsuits filed to stop (NZ) Telecom from directly acquiring an interest in pay TV broadcaster Sky Network languishes in court proceedings. Primary objector, Clear Communications, became 25% owned by British Telecom during March which only further complicates the decision for backers of the suit. BT has been adversely impacted by the growth of telephony + television cable service in UK, losing now more than 1,300,000 telephony subscribers to cable TV firms. It, thus has direct experience with what can happen to a telephone company when it is faced with competition from a firm offering both TV and telephony in the same wire. How BT's position on the Clear Board will impact the ongoing suit is not evident but there is likely to be a new strengthening within Clear to settle another matter, with BT on board. Clear is owned 25% by Television New Zealand and TVNZ subsidiary BCL provides significant technical services to Clear under contract. TVNZ is also a substantial owner (nearly 17%) in Sky Network, where TVNZ sits on the broad as well. Thus TVNZ is on one hand suing Telecom not to be a partner in Sky while simultaneously sitting on a board with Telecom. "*Despite of this tangled web, TVNZ identifies more with the Telecom people than with the Clear people*" confides a Clear source. "*I expect there to be some new pressures to have TVNZ removed from the Clear Board, even perhaps removed as a stockholder, because of the conflicts here.*" How deeply is TVNZ in support of Telecom? They try hard to walk middle road of course but are providing Telecom's new broadband cable TV network with 3 channels of TV programming created by a department of TVNZ, will supply as many as 3 more by end of this year. Clear's lawsuit makes much of the conflicts within Sky if Telecom is allowed directly into the ownership position, but fears equally the strengthening of the relationships between TVNZ and Telecom.

QUOTE / Unquote

Rupert Murdoch at the National Press Club (Washington, DC) late in February:

"*I am not a conservative. I am a radical because I believe in change. For better or worse, this is a reflection of my thinking, my character, my values. I am proudly responsible for the best of it, and guilty of the worst of it. Sometimes you are treated like the skunk at a tea party. But that is the fate of anyone who challenges the status quo.*"

Telecom's announcement of a major rollout of broadband cable plant is not without some substance. Major equipment suppliers to Telecom indicate they have received during March hard orders for very large quantities of cable TV hardware for the new plants. Telecom, like every other new cable operator in the world, is facing some major deployment problems however. Critical equipment shortages for subscriber interface units (see report, p. 11 here) may be weak point in rollout. Lacking the interface units, cable rollout is only a PR exercise as UK, US and Australian cable operators are discovering. Current rule of thumb for cable TV planners: If you need it tomorrow, you should have ordered it six months (or a year!) ago. Telecom is scheduled to complete cable laying in Whitby region this week, is benefiting from underground ducting in place and ability to pull through additional cable + fibre for rollout of broadband network.

Saturn Communications is installing cable from Kapiti Coast region into Hutt Valley by following the existing pole line plant of power company partner in the area. There had previously been speculation Saturn had an arrangement with Clear to utilise their existing fibre trunk which follows low land railroad route into Hutt Valley region.

Now under construction Taupo Cablevision (Inc.) has selected General Instrument as a major supplier through New Zealand representative Maser Technology Group. Taupo's system plans midwinter start with 20+ channels.

Ministry of Commerce is putting together task force to investigate new area of "Radiation Limits" for cable television systems. There is no direct health hazard here: Ministry is concerned that as cable firms continue to sprout up around New Zealand, unnecessary radiation of signals from cable TV lines might create interference for through the air services. A cable television plant utilising cable frequencies between 48 and 550 MHz, for example, parallels within its cable spectrum space used in the airwaves by a wide variety of users including life and death communication circuits employed by police, public safety, and the airlines. If a cable TV system accidentally allowed any of its cable-secure signals to radiate into the air, there could be interference or worse to one of these transmission circuits. Elsewhere in world government agencies have established maximum radiation levels allowed and measurement techniques to determine whether accidental radiation exceeds these limits. A similar set of rules and acceptable measurement techniques is likely here. The cable operator has no interest in radiating signals as such radiation could just as easily be picked up by non-subscribers in the area of his lines who would find their "fortuitous" reception ample reason not to pay for a cable connection. Still, it happens and one of the most common ways is when a cable subscriber mistakenly connects both his rooftop aerial and his cable line to the TV set simultaneously. In this scenario, the cable TV signals go to the TV and the rooftop aerial and the latter ends up retransmitting the signals over the neighbourhood. Australia has a similar project underway through Standards Australia (through Committee RC/5).

Sky Network's promise to allow "remote UHF broadcasters" in regions such as Gisborne to carry Rugby matches where Sky is not available was retracted when TVNZ pointed out Sky had no such rights to sell or give away. TVNZ has simultaneous or delayed rights to most telecasts and refuses to grant Gisborne's UHF telecaster permission to carry the matches in front of the release time on TV1. Benefiting from this snafu is the Gisborne cable system PacSat Cable TV which apparently was able to arrange a contract with Sky. PacSat has already installed a 13 GHz private microwave system that receives the Sky sport channel transmission at a point 60km north of the Hawkes Bay transmission point and relays on to Gisborne; another 60 km. A similar agreement exists with the PacSat cable system serving Greymouth.

Continental Cablevision, with an interest in Singapore and Australian cable operations, is merging with US West telephone company in deal valued at more than US$10.8B. The new company has a combined cable TV subscriber base of 4.2 million plus a shared ownership with other cable firms of an additional 11.5 million. Using favourite cable industry rule of thumb (divide total selling price by number of subscribers) the deal works out to US$2,570 per cable subscriber; certainly an up market sale.

Terrestrial Broadcasting

UCB, now better known as TV4, continues to face significant problems in bringing to air new Auckland based station. Group has obvious financial problems, accentuated by sign posted in front entry way of facility requesting donations to help pay staff and trade supplier accounts. (It may be a sign of the times but Radio Rhema has also conducted a radio appeal for funds recently claiming it is was operating on bank overdraft and required $250,000 to put things right again.) UCB has rights to chain of 39 UHF television frequencies throughout New Zealand, originally saw itself as a "family oriented" television channel with heavy Christian value overtones. More recently, it has been emphasising plans that are more Christian and less "commercial" in content. They do not lack for planning: One current scenario has them somehow funding and starting Auckland master station and then bypassing terrestrial microwave in favour of satellite delivered link that would transport their TV4 service to terrestrial rebroadcasters and possibly cable + DTH viewers throughout the Pacific region. Origin of that plan may be another would-be UHF "family TV" broadcaster, Lifeway Ministries Trust headquartered in Warkworth region. Lifeway has been circulating detailed plan based upon one master station serving through satellite relay lower power retransmission stations scattered throughout New Zealand and the Pacific. Lifeway has obtained registration as "(The) Family Television Network" and has begun construction for a channel 62 outlet to operate in the Warkworth area. They already have their first "network" affiliate signed up, a channel 34 station to serve portions of Northland.

Sky Network commercial rates are now being adjusted (April 1) to reflect added 'value' for establishments carrying Sky Orange and Discovery services. In a late February memorandum to commercial accounts, Sky advised affiliates of the following rate adjustments:

Sport + HBO + News - current rate
Sport + HBO + Orange - current rate
Sport + HBO + Orange + News - current rate plus 3%
Sport + HBO + Orange + News + Discovery - current rate plus 5%

Establishments who do not notify Sky of their package preference by April 1st will automatically receive the Sport + HBO + News package.

Lateral thinking may be at work as the government sifts through proposals which were received during February to allow a final plan for actual use of UHF television channels 35-42. In the master plan adopted in 1991, when UHF TV channels 27 to 62 were initially adopted and auctioned off, channels 35-39 were set aside on a reserved basis for a later visit as a Maori preserve. At the same time, channels 40-42 were set aside for specialised low power or community (as opposed to regional) use. Since 1991, a number of proposals have been floated as to actually putting the Maori channels into service. In that period of time any qualified Maori group could make application for a channel assignment in the 35-39 region; one such permit has been issued (channel 36) but the station has not been put on the air (a Te Mangai Paho funded 13 week trial of Maori programming is scheduled for a May start in the Auckland region). Now there are new, additional pressures on this preserve and channels 40-42 as well. Channel 42 (41 in Auckland only) was designated in (1991) 'Interim Rules' for non-profit community use and channel 41 (42 Auckland) was designated for schools and others operating in a non-commercial manner at power levels of 0.5 watts (eirp) or below. Approximately ten such school licences have been granted (CTD 9402, p. 41) and most are on the air. The Ministry of Commerce is attempting to unravel these channels now that centres such as Auckland have run out of available UHF (television) channels, possibly with the goal of creating new channels in congested areas. Under one serious plan being considered, channels within the 35-42 region would be 'assigned' to specific communities thereby allowing a nation-wide engineering plan to be drawn up to use and reuse these channels on a practical basis. Out of this, it is felt, will come one or more new channels for non-Maori use in areas such as Auckland. There are some interesting conflicts. Channels 35-38, although reserved for Maori use in 1991, have been in use for a non-television service (aeronautical radionavigation; radar) for decades. In regions where this radar is still operational (it is being phased out slowly in favour of higher radar frequencies), TV could not use these frequencies anyhow. Thus the Maori "preserve" for these channels has at best been tenuous and secondary to the older radar use. Channel 39 is also allocated for 'Amateur Radio Use' and in Auckland, Wellington and in some smaller centres this channel actually is in regular use by "hams." The amateur use includes the transmission of television programming, although the amateur's permanent rights on this (TV channel) band are not beyond question. Channel 40 has been lightly used by TV3 and others for rebroadcast (translator) while 41 and 42 have special purpose users including the previously mentioned schools. None of this was especially well thought out or detailed in the 1991 allocations scheme. When the Ministry does announce the latest plan, look for a new round of 'UHF Television Tenders' to be put up before the end of this calendar year. And the tendering process may also differ from past rounds with two separate rounds for each channel: The first to eliminate all but the two highest bidders, the second to determine in an additional round the actual 'winner' for each new channel allocation. There is one more possibility: Within the new tender procedure look for "digital TV expansion channel" to somehow be included that would allow TVNZ, TV3 and others to begin simultaneous transmission of first-plateau digital television within the UHF frequency range while still retaining their parallel transmission rights for analogue in the VHF region.

Horizontal satellite? You may be hearing this phrase shortly in trade circles. Television New Zealand, after conducting tests through its BCL subsidiary in the MMDS 2.1 GHz range last year, is studying a plan that is unlike any other in use on this globe. They are suggesting that if low power Ku band (12 GHz frequency range) transmitters are located properly, they could send multiple channels of television directly into homes just as DBS satellites now do. It is satellite TV without the satellite, substituting terrestrial located 12 GHz transmitters for the satellite norm. Why? They have in mind offering several dozen channels of pay TV programming in densely populated areas and to use common off-the-shelf home DBS type receiving equipment to receive the transmissions. Again, why? The hardware exists for the receive portion of the network at reasonable pricing, although the transmitters could be tricky (and expensive). This would allow TVNZ to branch out into the pay TV arena in competition to Telecom's new cables and Sky's slow expansion, offer more channels than Sky (by a factor of 3 to 10) and capture for itself a major chunk of the projected gold mine in pay TV in New Zealand metropolitan areas. One minor hitch: Frequencies to be used are allocated world-wide exclusively to DBS (direct broadcast satellite) and would require New Zealand as a country abandoning an international agreement to which they are a party. Operation of such a terrestrial system would make very difficult (perhaps impossible) the use of the same (DBS) frequency range for reception of real satellite transmissions - and that is one way to preclude metropolitan New Zealanders from gaining access to foreign satellite transmissions (simply block them out with terrestrial signals!). Horizontal satellite - file it away.

Research International claims a recent New Zealand and Australian survey points up differences and similarities in each country for television viewing habits. They found 79% of Kiwis regard watching television as a "key activity" against 73% for Australia. In the 16-18 year olds, 67% of Kiwis also listed "sleeping" as a key activity but across the Tasman only 39% did so. By city, Christchurch had the highest percentage of TV watchers as a key activity (91) while Wellington was lowest here with 72%. Lowest overall was Sydney at 69%.

New Zealand Broadcasting Summit, arranged by the Institute for International Research, opens in Auckland April 23.

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